

REMARKS

Examiner Swiger is thanked for withdrawing his rejections over references to Sherman and Morrison. However, in the pending Office Action he issued new rejections of the claims over U.S. Patent Nos. 6,090,111 to Nichols and 6,280,442 to Barker. Reconsideration of the claims is respectfully requested in light of the present amendments, remarks and declaration.

The Barker Reference is Not a Proper Reference in this Case

The Barker reference is not prior art to this application. As pointed out before, this application claims priority to that reference. A claim to priority was filed in a prior amendment. Although no petition for late acceptance of the priority claim is believed necessary, the prior amendment requested the PTO to treat the claim as such a petition if deemed necessary.

Aside from the priority claim to the Barker reference itself, the effective filing date based on the immediate parent application and the inventorship of this case show that that reference is inapplicable. This case is entitled to the August 28, 2001 filing date of its parent, Serial No. 09/940,902. Barker issued on that date, and was not previously published. The “inventive entity” is the same in both cases. Accordingly, Barker is not citable under Sections 102(a), (e), (f) or (g) at least because the reference is that inventive entity’s own work. It is not citable under Section 102(b) because it was not published more than one year prior to the parent’s filing date.

Nichols Teaches Away from Threads

As a further basis for withdrawing the obviousness rejections of claims 54, 57 and 58, the Nichols reference specifically teaches that such threaded closure constructs are detrimental and provides a different closure to prevent problems it suggested. Threaded components, according

to Nichols, “necessarily require the application of undesirable torsional forces to the spine” and can “loosen under cyclically applied loads commonly encountered in the spinal column” (see column 1, lines 42-52). The reference provides tapered wedges of a locking member and slots in a reception channel to avoid those alleged problems (see column 2, lines 38-47). Throughout the specification the patentee makes clear that the locking member 18 is linearly inserted into its device (see, e.g., column 4, lines 30, 35, 58; column 5, lines 39, 61). Not only does Nichols not show internal threads or a set screw, it actively leads the person of ordinary skill away from any consideration of them.

The Claims are not Anticipated by or Obvious over Nichols

Respectfully, the analysis of the Nichols reference provided in the Office Action does not establish that it anticipates the pending claims. For example, the Office Action identifies slot 64 as a groove substantially perpendicular to an axis, as recited in independent claim 44. However, it is sliding locking member 18 that fits in slot 64, and not a ring member as the claim recites.

Nonetheless, to move this application more quickly to allowance, amendments are being made to clarify subject matter. Independent claim 44 is being amended to recite that the upper opening portion has an internal thread, and a set screw is threaded into the receiver member to lock apparatus. As explained above, the Nichols reference does not show such a thread or set screw, and it cannot suggest such structure because it specifically teaches to move away from it.

Claim 54 is being amended to include the language of its independent claim 53. As discussed above, Nichols does not include an internal thread and instructs the person of ordinary skill to avoid threads. The claim is not being narrowed, and therefore the amendment cannot be

considered to necessitate a new ground of rejection, should one be offered. Other claims dependent from claim 53 are being amended only to change their dependency.

Likewise, claims 70 and 74 are being amended to include the features recited in their respective independent claims 69 and 73. As discussed above, Nichols does not include an internal thread and instructs the person of ordinary skill to avoid threads. Nichols also does not disclose a lower opening portion that is larger than the inner crest diameter of an internal thread. Claims 70 and 74 are not being narrowed, and therefore these amendments cannot be considered to necessitate a new ground of rejection, should one be offered. Other claims dependent from claims 69 and 73 are being amended only to change their dependency.

Many of the dependent claims also include features not seen or suggested in the Nichols reference. For example, claim 51 recites that the head of a bone anchor is substantially between the recited retaining member and an upper opening portion of a receiver member. Nichols shows a head portion 20 that is substantially between ring 42 and the lower opening of its body 16. Claim 57 recites a set screw, which as discussed above is not shown and its explicitly rejected by the Nichols reference. Claim 58 recites reverse-angle threads, which likewise are not shown or suggested by Nichols. Claims 72 and 76 recite a crown member and a locked condition in which the anchor head contacts the retaining member. Neither of those features are shown or suggested by Nichols. The Nichols device relies on the ability of fastener 14 to move with respect to body 16 and ring 42, and on the pressure of rod 12 on head portion 20. Contact between ring 42 and head portion 20 inhibits or eliminates such movement, and pressure of rod 12 naturally will move head portion 20 out of contact with ring 42. At least these claims are allowable on their own merit, as well as based on their dependence from an allowable claim.

New Claim

New claim 77 recites that the part of a bone anchor that is substantially surrounded by the retaining member is a neck of the bone anchor. That structural relationship is absent from Nichols. Screw 14 is inserted through the top of body 16 so that its head portion 20 rests on the narrowed opening at the bottom of body 16. Ring 42 is placed so that the screw cannot fall back through body 16. Thus, placing ring 42 around the neck 22 of the screw would eliminate the ring's function of preventing the screw from exiting the top of body 16. Nichols' teachings steer the person of ordinary skill away from moving the placement of ring 42.

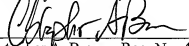
Conclusion

It should be understood that the above remarks are not intended to provide an exhaustive basis for patentability or concede the basis for previous rejections. Applicants reserve the right to contest later positions taken by the Examiner that are not specifically addressed herein. None of the arguments made herein are intended to limit the literal or equivalent scope of the claims.

On receipt of this response, Examiner Swiger is respectfully requested to grant an interview to discuss the response with Applicant's counsel. It is believed that a brief discussion will significantly assist understanding and resolution of any issues that may remain outstanding.

In conclusion, because the claims are allowable over the relied-on references for at least the above reasons, a Notice of Allowance in this case is respectfully solicited.

Respectfully submitted,



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